Project: Lower Monumental 1:55-Scale General Model

PI: Deborah Cooper

Branch/Group: Inland Hydraulic Structures Branch, Structures and Channels Group

Project Description/Activities/Capabilities:

Lower Monumental Dam 1:55-scale physical general model investigating performance of deflectors, stilling basin, and tailwater, and entrainment flows.

Sponsor: Walla Walla District. POC – Dan Katz

CHL Personnel

Deborah Cooper, Robert Bryant, James Cessna

Project Location and Description:

Lower Monumental Dam is located at River Mile 41.6 on the Snake River in Franklin and Walla Walla Counties, Washington. The dam is about 3800 feet long and includes a powerhouse, spillway, navigation lock, and two fish ladders (Figure 1). The powerhouse is on the north end of the dam and consists of six Kaplan turbines, each with a 135,000-kilowatt generator. Maximum discharge through the powerhouse is approximately 120 kcfs. The spillway is 512 feet long and has eight 50 ft-wide by 60 ft-high tainter gates. The spillway crest is at elevation 483.0 with a normal pool elevation of 540.0.

Facilities: Bldg. 3050

Related Topic Areas: Physical models, flow deflectors, dissolved gas, entrainment flow, rivers, reservoirs, hydraulic structures, fish passage, surface water, hydropower, debris movement